Depletion of nutritional value of wheat and rice due to climate change

3267. SHRI RAMDAS AGARWAL: Will the Minister of AGRICULTURE be pleased to state:

(a) whether climate change is reportedly depleting nutritional value of wheat and rice, the main sources of energy for Indians, who are already having problem of 20 per cent protein deficiency;

(b) whether a study by the Indian Council for Agriculture Research has also found that protein content in wheat can fall by 10 per cent and iron content by 8 per cent due to carbon emissions; and

(c) if so, the steps Government proposes to take so that climate change may not rob food of nutritional value and save people from major health implications?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (PROF. K.V. THOMAS): (a) and (b) Several studies conducted globally indicate that protein content of wheat decreases as carbon dioxide increases. On the contrary, increase in temperature is known generally to increase the protein content in wheat. The net affect of climate change would therefore depend on the relative change in carbon dioxide and temperature. As such, there is no confirmed and validated result of the impact of climate change on nutritional value of wheat and rice, as a direct consequence of climate change. However, reduced water or varying temperature will almost certainly cause translocation related problems to the grain, during grain formation stage, thus affecting productivity.

(c) The Indian Council of Agricultural Research launched a national Network Project entitled "Impacts, Adaptation and Vulnerability of Indian Agriculture to Climate Change' in Xth Plan. The network started in 2003-04 and the total outlay of the network during the Xth Plan was close to Rs.9.5 crores. The project has been structured during XI plan also with more budgetary support (Rs.16.15 crores). The network is focusing on a comprehensive understanding of the impacts of global climate on different sectors of agricultural production such as crops, fish, livestock etc. This project also aims to determine the available management and genetic adaptation strategies to meet the impact of climatic change and climatic variability, as well as mitigation options for reducing climate changes in agro-ecosystems.

Centrally sponsored schemes to help farmers

3268. SHRI B.S. GNANADESIKAN: Will the Minister of AGRICULTURE be pleased to state:

(a) the details of the centrally sponsored schemes to help the farmers and the subsidy component of the said schemes;

(b) whether Government has initiated any appropriate awareness campaign among the farmers regarding the availability of those schemes so that the rural farmers can be benefited; and

(c) if so, the details thereof?